



AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1 to 26. (Cancelled)

27. (New) A computer program, disposed on a computer readable medium, the computer program including instructions that when executed:

provide a graphic display that includes an operational history of program threads for execution by, respective, multiple multi-threaded programmable units within a processor, the instructions capable of providing a graphic display that includes an operational history of at least two of the threads from a same one of the multiple multi-threaded programmable units and at least two of the threads from different ones of the multiple multi-threaded programmable units, at least a portion of the graphic display having an axis representing a progression of time;

receive user input selecting a thread at a point in time on the graphic display; and  
in response to the user input, provide a graphic display of information about a selected thread at the point in time.

28. (New) The computer program of claim 27, wherein the graphic display comprises a scrollable window, and wherein a time period displayed can be changed by scrolling the window in either direction of the axis representing the progression of time.

29. (New) The computer program of claim 27, wherein the operational history comprises an operational history of thread execution by a one of the multiple multi-threaded programmable units.

30. (New) The computer program of claim 27, wherein the operational history comprises an operational history of simulated execution by a one of the multiple multi-threaded programmable units.

31. (New) The computer program of claim 27, wherein the progression of time comprises a progression of execution cycles.

32. (New) The computer program of claim 27, wherein the graphic display includes graphic identification of when a thread executes and when the thread does not execute.

33. (New) The computer program of claim 27, wherein the graphic display of information about the selected thread comprises identification of at least one instruction being executed by the selected thread at the selected point in time.

34. (New) The computer program of claim 27, wherein the graphic display further comprises a label provided by source code of a thread.

35. (New) The computer program of claim 27, wherein the graphic display further comprises identification of access by a thread to a component external to a multiple-threaded programmable unit associated with the thread.

36. (New) The computer program of claim 35, wherein the component comprises a component external to the processor.

37. (New) The computer program of claim 35, wherein the component comprises a component internal to the processor.

38. (New) The computer program of claim 27, wherein the graphic display further comprises identification of at least one memory access operation initiated by a one of the threads.

39. (New) The computer program of claim 38, wherein the graphic display further comprises identification of completion of the at least one memory access operation.

40. (New) A method, comprising:

providing a graphic display that includes an operational history of program threads for execution by, respective, multiple multi-threaded programmable units within a processor, the graphic display comprising an operational history of at least two of the threads from a same one of the multiple multi-threaded programmable units and at least two of the threads from different ones of the multiple multi-threaded programmable units, at least a portion of the graphic display having an axis representing a progression of time, wherein the graphic display comprises a scrollable window, wherein a time period displayed in the graphic display can be changed by scrolling the window in either direction of the axis representing the progression of time, and wherein the graphical display includes graphic identification of when a thread executes and when the thread does not execute;

receiving user input selecting a thread at a point in time on the graph; and

in response to the user input, providing a graphic display of information about the selected thread at the point in time.

41. (New) The method of claim 40, wherein the operational history comprises one of:  
(1) an operational history of thread execution by a one of the multiple multi-threaded programmable units, and (2) an operational history of simulated thread execution by a one of the multiple multi-threaded programmable units.

42. (New) The method of claim 40, wherein the graphic display of information about the selected thread comprises identification of at least one instruction being executed by the selected thread at the selected point in time.

43. (New) The method of claim 40, wherein the graphic display further comprises:  
identification of at least one memory access operation initiated by a one of the threads;  
and  
identification of completion of the at least one memory access operation.